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ABSTRACT

This social studies guide, for use in grades 7 and 8, is one of a series of guides, K-12, that were developed by teachers to help introduce environmental education into the total curriculum. The guides are supplementary in design, containing a series of episodes (minilessons) that broaden the student's views of environmental problems through social studies activities. The episodes are built around 12 major environmental concepts that form a framework for each grade or subject area, as well as for the entire K-12 program. Although the same concepts are used throughout the K-12 program, emphasis is placed on different aspects of each concept at different grade levels or in different subject areas. This guide focuses on aspects such as sociology, economics, psychology, and political science. The 12 concepts are covered in one of the episodes contained in the guide. Further, each episode offers subject area integration, subject area activities, interdisciplinary activities, cognitive and affective behavioral objectives, and suggested references and resource materials useful to teachers and students. (Author/TK)

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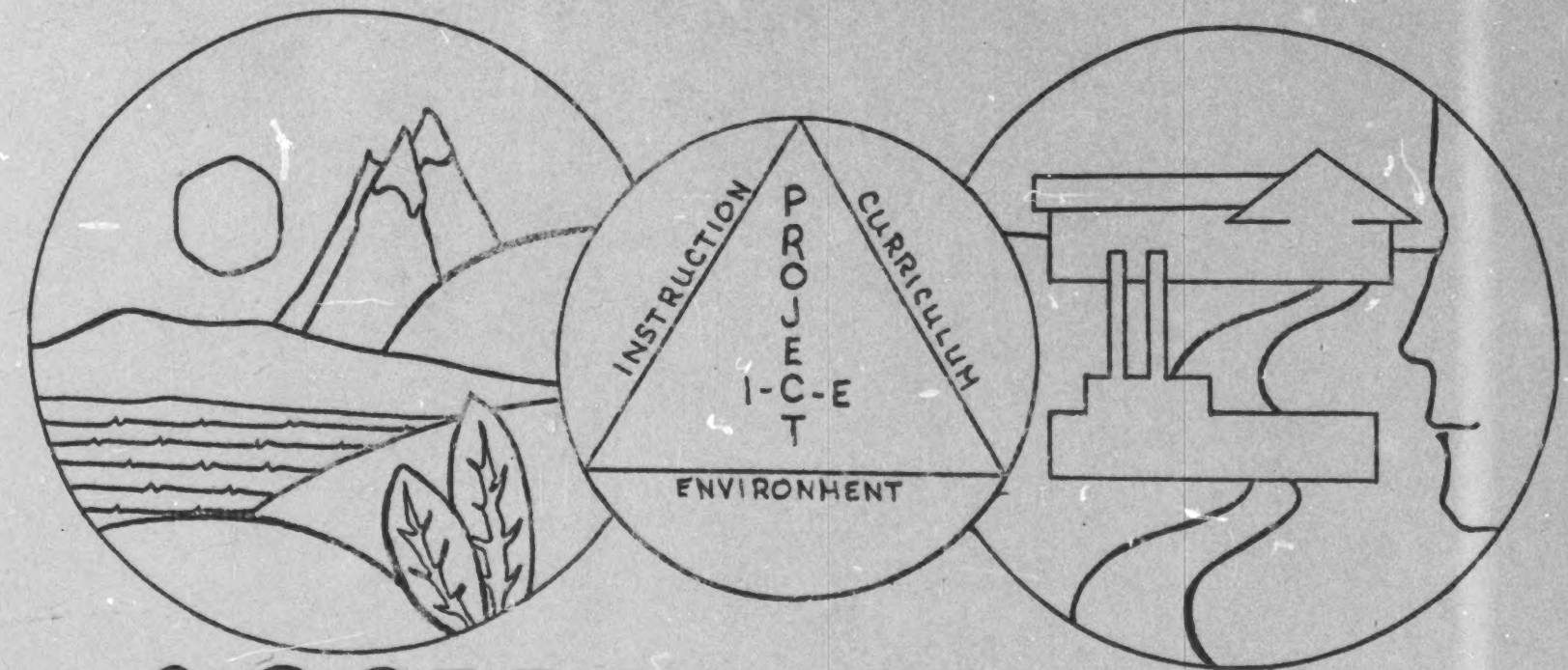
ENVIRONMENTAL EDUCATION GUIDE



SOCIAL STUDIES 7-8

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FORWARD TO PROJECT I-C-E ENVIRONMENTAL EDUCATION GUIDES

In 1969, the First Environmental Quality Education Act was proposed in the United States Congress. At the time of the introduction of that legislation, I stated:

"There is a dire need to improve the understanding by Americans of the ominous deterioration of the Nation's environment and the increasing threat of irreversible ecological catastrophe. We must all become stewards for the preservation of life on our resource-deficient planet."

In the three years since the Environmental Education Act was passed by the Congress, much has happened in the United States to reinforce the great need for effective environmental education for the Nation's young people. The intensive concern over adequate energy resources, the continuing degradation of our air and water, and the discussion over the economic costs of the war against pollution have all brought the question of the environmental quality of this nation to a concern not merely of aesthetics but of the survival of the human race.

The intense interest by the public in the quality of our lives as affected by the environment clearly indicates that we cannot just use incentives and prescriptions to industry and other sources of pollution. That is necessary, but not sufficient." The race between education and catastrophe can be won by education if we marshall our resources in a systematic manner and squarely confront the long-term approach to saving our environment through the process of education.

As the incessant conqueror of nature, we must reexamine our place and role. Our world is no longer an endless frontier. We constantly are feeling the backlash from many of our ill-conceived efforts to achieve progress.

Rachel Carson's theme of "reverence for life" is becoming less mystical and of more substance as our eyes are opened to much of the havoc we have wrought under the guise of progress. A strong commitment to an all-embracing program of environmental education will help us to find that new working definition of progress that is a pre-requisite to the continued presence of life on this planet.

- Senator Gaylord Nelson

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PREFACE

The energy crisis, overpopulation, air and water pollution and the depletion of man's natural resources--sound familiar? The apparent need for environmental quality through education has never been so intense as it is today. This concern is exhibited by industry, interest groups and governmental agencies and by the young, those individuals you are teaching.

Seventh and eighth graders have a noticeable awareness of their environment, its problems and potential solutions. Nevertheless, students' views of a problem are usually limited to the obvious and confined to the local community. Now is the time to broaden the students' view of environmental problems, and you as a teacher have the opportunity to do just that. Man's manipulation of his world and his basic survival have vast implications for social studies classes. Social studies offers excellent avenues of exploration into existing world environmental problems. Sociology, economics, psychology, political science, history or geography--all lend their insights into preserving and conserving the environment. Integrated environmental education materials like this guide allow the student to develop attitudes, clarify values and promote decision making.

Through Project I-C-E (Instruction-Curriculum-Environment), you have the necessary materials to supplement your present social studies program. The possibilities herein suggested are limitless; the learning avenues for environmental education are open to you.

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DIRECTIONS FOR USING THIS GUIDE

This guide contains a series of episodes (mini-lesson plans), each containing a number of suggested in and out of class learning activities. The episodes are built around 12 major environmental concepts that form a framework for each grade or subject area, as well as for the entire K-12 program. Further, each episode offers subject area integration, multi-disciplinary activities, where applicable, both cognitive and affective behavioral objectives and suggested reference and resource materials useful to the teacher and students.

1. This I-C-E guide is supplementary in design--it is not a complete course of study, nor is its arrangement sequential. You can teach environmentally within the context of your course of study or units by integrating the many ideas and activities suggested.

2. The suggested learning activities are departures from regular text or curriculum programs, while providing for skill development.

3. You decide when any concepts, objectives, activities and resources can conveniently be included in your unit.

4. All episodes can be adapted, modified, or expanded thereby providing great flexibility for any teaching situation.

5. While each grade level or subject area has its own topic or unit emphasis, inter-grade coordination or subject area articulation to avoid duplication and overlap is highly recommended for any school or district seeking effective implementation.

This total K-12 environmental education series is the product of 235 classroom teachers from Northeastern Wisconsin. They created, used, revised and edited these guides over a period of four years. To this first step in the 1,000 mile journey of human survival, we invite you to take the second step--by using this guide and by adding your own inspirations along the way.

PROJECT I-C-E TWELVE MAJOR ENVIRONMENTAL CONCEPTS

1. The sun is the basic source of energy on earth. Transformation of sun energy to other energy forms (often begun by plant photosynthesis) provides food, fuel and power for life systems and machines.

2. All living organisms interact among themselves and their environment, forming an intricate unit called an ecosystem.

3. Environmental factors are limiting on the numbers of organisms living within their influence. Thus, each ecosystem has a carrying capacity.

4. An adequate supply of clean water is essential to life.

5. An adequate supply of clean air is essential for life.

6. The distribution of natural resources and the interaction of physical environmental factors greatly affect the quality of life.

7. Factors such as facilitating transportation, economic conditions, population growth and increased leisure time influence changes in land use and population densities.

8. Cultural, economic, social, and political factors determine man's values and attitudes toward his environment.

9. Man has the ability to manage, manipulate and change his environment.

10. Short-term economic gains may produce long-term environmental losses.

11. Individual acts, duplicated or compounded, produce significant environmental alterations over time.

12. Each person must exercise stewardship of the earth for the benefit of mankind.

A "Concept Rationale" booklet and a slide/tape program "Man Needs His Environment" are available from the I-C-E RMC to more fully explain these concepts.

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Environmental: **Integrated with:**

CONCEPT NO. 1 - Energy **SUBJECT** Social Studies

ORIENTATION Energy Resources **TOPIC/UNIT** Ancient History - Geography

BEHAVIORAL OBJECTIVES

Cognitive:

List four ways that early man depended on plant life; directly through berries, etc. or indirectly through animals thus showing an understanding that energy from the sun is converted to a form all living things can use for life.

Affective:

Gain an appreciation of man's total dependence on the sun from the food that he eats and the material that he uses by tracing all food back to the sun.

Skills Used:

1. Ability to construct charts.
2. Oral skills.
3. Comparison/contrast.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Draw and describe or construct tools and weapons used by primitive men.

B. Prepare reports to be given to class on life style of early man. Food gathering, hunting, etc.

C. List types of plants and animals consumed by early man.

D. Construct life cycle chart which will show position of man in relation to the plants and animals of his environment.

E. Name present-day activities that resemble the food gathering and hunting practices of early man.

Outside or Community:

A. Conduct a field trip of an available area to find examples of foods used by early man. (survival food).

B. Visit a museum to observe tools used by early man.

C. Locate book dealing with early man.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Books:
How the First Men Lived,
Hogben, Lancelot.
Man's First Million Years,
Lucas, Jannette.

Prehistoric Man
Time Life Series
Magazines - Natural History
National Geographic
Appropriate Current
Articles

Audio-Visual:

Film #220: A World Is Born
I-C-E - RMC

Kit 6: Crisis of the Environment
I-C-E - RMC

Community:

Local Museum of Natural History
- Exhibition on Primitive Man

State Historical Society
- History of Local Primitive Man

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental: **Integrated with:**

CONCEPT NO. 1 - Energy **SUBJECT** Social Studies

ORIENTATION Energy Resources - Sun **TOPIC/UNIT** Ancient History

BEHAVIORAL OBJECTIVES

Cognitive:

State two reasons why early man considered the sun as a god (Ra-Egyptian, Sun God).

Affective:

Suggest comparisons with America's adoration of the sun. (Examples - sun tan, bathing, through a study of Ra, the Sun God of the Egyptians.

Skills Used:

1. Location skills:
   - Use of books
     - Table of contents
     - Appendix
     - Index
     - Pictures & Cartoons
2. Use of Text

(continued)

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Creation of a chart of sun worship practices-legends, statues, ceremonies.

B. Discussion of man's dependency on the sun. Attempt to justify early man's feelings.

C. View Egyptian art work on the "Sun".

D. Study the attitude of the Aztec towards the sun.

Outside or Community:

A. Observation of plant life in sun and shade areas, perhaps school lawn and shrub areas or forested area.

B. Visitation to a department store to compile a list of sun-related products used by Americans.

C. Using your media center, create a bibliography of reference books dealing with photosynthesis and the Egyptian sun worship.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Books:
World Book Encyclopedia, Egypt.
Life in the Ancient World,
Random House, 1961.
Magazines:
Life
National Geographic
Natural History

Audio-Visual:

Films:
6949 Sun's Energy, color, 14 min.
Bureau of Audio-Visual Instructions
1327 University Avenue
P. O. Box 2093
Madison, Wisconsin 53701
Art Teacher.
Kit 9, Environmental Quality
Index, America Is in Trouble,
I-C-E RMC

Community:

Department Store

SKILLS (continued)

3. Use of reference materials:
   - Encyclopedias
   - Readers Guide
   - Card Catalog
4. Organization skills:
   - Note taking
   - Making charts
5. Evaluation information:
   - Reading for a purpose
   - Making inferences

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Environmental:

Integrated with:

CONCEPT NO. 2 - Ecosystem

SUBJECT Social Studies

ORIENTATION Ecosystem Community

TOPIC/UNIT Ancient History or Anthropology

BEHAVIORAL OBJECTIVES

Cognitive:

Construct a chart showing how the hunter and gatherer interacted with his ecosystem.

Affective:

Volunteer to find information from other sources that illustrate the type of relationship early man had with the environment.

Skills Used:

Skills of making a chart.

1. Gather illustrations.
   a. Discuss and explain
   b. Put an example on board
   c. Read and interpret chart

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Class make a large chart showing raw foods today and those used in the Stone Age.

B. Prepare a picture exhibit of the Stone Age implements beginning with the earliest forms and show how the refinement of implements was accompanied by a rise in standard of living.

C. Prepare written reports comparing the equipment and methods of hunting and fishing today with those of the Stone Age.

Outside or Community:

A. Fishing trip.
   1. Students bring their own fishing equipment.
   2. Cleaning of fish.
   3. Compare the preparation of fish.
      a. Prepare both ways if possible. (fry and smoke).
   4. Compare fishing equipment of Stone Age with those of today.

B. Visit to a natural history museum.

C. Sporting goods presentation on new fishing techniques and equipment.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Library-books pertaining to food and tools of Stone Age:

1. Graven with Flint, F. Coe.
2. First Horseman, P. Crowell.
3. How the First Men Lived by L. Hogben.
4. Man's First Million Years by J. Lucas

Excerpts from Golding's, The Inheritors.

Audio–Visual:

See sources of Environmental AV materials -
I-C-E bibliography of available materials -
Vertical file
Tips for a Good Field Experience, I-C-E - RMC
Kit 8; Conservation - A Picture Discussion Kit, I-C-E - RMC

Community:

Local sporting goods dealer

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Environmental:

CONCEPT NO. 2 - Ecosystem

ORIENTATION Land Use and Abuse

Integrated with:

SUBJECT Social Studies

TOPIC/UNIT U. S. History, Geography, Current Events

BEHAVIORAL OBJECTIVES

Cognitive:

List one area where man's misuse of the environment has had a negative effect on the ecosystem.

Affective:

Suggest several changes in man's technology which would lessen man's negative impact on his environment.

Skills Used:

1. Using library aids to locate books.
2. Reading to find specific information.
3. Discussing.
4. Observing.
5. Note taking.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Show film depicting "dust bowl".
B. Students locate books or articles which provide information on the "dust-bowl" years and its effect upon all living things in that area.
   1. Take notes on reading, noting especially:
      a. Lack of food
      b. Interdependence of living organisms
      c. Causes of the "dust bowl".
C. Research road building procedures.
D. Show film "Jumkdump".
   1. Discuss the possible impact of existing situations illustrated by the film on the ecosystem.
   2. Show "Junkdump" a second time.

Outside or Community:

A. Visit farms and observe the interdependence of plants, animals, and humans.
   1. In class, have children list or draw a diagram of interrelationships they observed.
B. Visit quarry or gravel pit.
C. Visit dumping area.
D. Come Fly With Me---Any season Field Activity Guide, I-C-E - RMC

   Note: This activity provides positive motivation to student concerning land abuse.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Man, Land: Williams College Center for Environmental Studies, The First Two Years, William Carney, Williamstown, Mass.: William College, Dec., 1969
Plants, Man, and Life, Edgar Anderson, University of Calif., Berkeley, 1967

Audio–Visual:

Films:
Dust-Bowl, #6030
Bureau of Audio-Visual Inst.
1327 University Avenue
P. O. Box 2095
Madison, Wisconsin 53701
Junkdump; I-C-E - RMC
Kit 21, Eco Lab: A Study of Rural and Urban Ecology, I-C-E - RMC.
Kit 25, The Land Use Game, I-C-E - RMC

Community:

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Environmental: **Integrated with:**

CONCEPT NO. 3 - Carrying Capacity **SUBJECT** Social Studies

ORIENTATION Water's Importance to Population Centers **TOPIC/UNIT** Sociology, Population Trends

BEHAVIORAL OBJECTIVES

Cognitive:

Present three newspaper accounts pertaining to the impact technology has on the mobility of populations.

Affective:

Identify examples that show the need for conservation practices in his community.

Skills Used:

1. Putting together a newspaper.
2. Writing in the vernacular of newspaper articles.
3. Ability to extract relevant information from various sources.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Collect several magazine and newspaper articles related to population trends and/or view film depicting such trends.

B. Discuss the following:

1. Why people relocate
2. Population density of urban and rural areas and its effect on the use of natural resources.
3. Assign individuals or small groups to put together a newspaper with three factual articles on the misuse of natural resources.

Outside or Community:

A. Use encyclopedias to identify reasons for immigration or migration and to find other source books from the biblios. found in the encyclopedia.

B. Observe the employment which is a direct result of the natural resources in an area.

C. Through research, try to find the reason why early settlers left their homeland to settle here.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: Newspapers: Social Studies textbooks or materials on the U. S. Encyclopedias. History of school, community, from local city library. Time magazine. **Audio–Visual:** Bridge to Inquiry: Unit III - America's Environment. Unit IV - Our Ailing Cities. (Univ. Microfilms) A Xerox Co. Ann Arbor, Michigan Game, The Planet Management Game, SG 7 I-C-E - RMC Films: #430 - Urban Sprawl - I-C-E - RMC #6937 - Population Problem: U.S.A.: Seeds of Change BAVI, Madison, Wis. **Community:**	

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

CONCEPT NO. 3 - Carrying Capacity

ORIENTATION World Hunger

Integrated with:

SUBJECT Social Studies

TOPIC/UNIT Carrying Capacity and/or Current Events

BEHAVIORAL OBJECTIVES

Cognitive:

Verbally demonstrate that carrying capacity is a vital factor in the life of any system by role playing different national leaders solving food problems with a limit of five days or have destruction of the total environment.

Affective:

Demonstrate an awareness of the wastefulness in his daily living by identifying examples of waste for one day.

Suggest several ways that the identified wastes could be reduced or eliminated.

Skills Used:

1. Library research
2. Problem solving
3. Interview techniques
4. Discussion

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. After researching world hunger problems and/or viewing films or filmstrips on the problem, conduct a motivational discussion on:
   1. World Hunger Problems - India and other Asian countries.
   2. Amount of food in a closed system is limited.

B. Problem: If one person requires "x" amount of food in a month, can 2, 3, 4 or more people survive on that "x" amount?

C. Discuss the:
   1. Physical
   2. Mental
   3. Social reactions to an adequate diet.

D. Write a report on the carrying capacity of a densely populated area.

E. Discuss: How have some countries overcome crowding? Japan - floating factories, cremation rather than burial, vertical growth of cities (skyscrapers).

Outside or Community:

A. Have the class do research on how nations have tried to solve their food problems.

B. Role play different national leaders solving food problems --time limit of five days or destruction.

C. Invite local law enforcement officials to speak on problems of law enforcement in overcrowded areas.

D. Invite City Planner to speak on present problems and hoped-for solutions of the future.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: The Population Bomb, by Paul Ehrlich, 1968, Ballantine Books, Teacher's Reference. Wildlife Communities, by Clarence Hylander, 1966, Houghton-Mifflin Company. The Social Sciences, Concepts and Values, Grade 6, by Jovanovich, 1970, Harcourt, Brace and World **Audio–Visual:** See sources of Environmental a-v materials - I-C-E, Bibliography of available materials - vertical file. Kit 14, The Ecological Crisis, I-C-E - RMC Films: #7160-7161; Hunger in America B.A.V.I., Madison, Wis. #3583; Food and People B.A.V.I., Madison, Wisconsin **Community:** Local health officer Interview or as guest speaker Local law enforcement officer	

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental: **Integrated with:**

CONCEPT NO. 3 - Carrying Capacity **SUBJECT** Social Studies

ORIENTATION Population vs. Food Supply **TOPIC/UNIT** Geography or Current Events

BEHAVIORAL OBJECTIVES

Cognitive:

List on a piece of paper five factors which determine carrying capacity (climate, water, soil, etc.) on completion of these activities.

Affective:

Support the need for population control as well as the preservation of productive agricultural land.

Join in a class discussion suggesting reasons for the number of people living in their community.

Skills Used.

1. Interviewing
2. Cause and effect thinking.
3. Problem solving.
4. Writing letters seeking information.
5. Discussion

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Discuss carrying capacity in relation to food supply and area in which they live.

B. Write a letter to colleges to get i formation on studies that may have been conducted, involving overpopulation.

C. List variables which can increase the productivity of the land.

1. Fertilizer, irrigation, crop rotation, erosion prevention, etc.

2. Realize that even with these additives there exists an ultimate limit of production.

Outside or Community:

A. Ask local farmer to tell the class how many people his farm can support in addition to his own family. Is there an absolute number his farm will support?

B. Investigate an area of set dimension (1 acre).

1. Determine amount of food that can be produced on that acre.

a. Ask farmer how much was produced last year.
b. Does he know of, or is he using methods to increase production?

C. Ask local farm agent to accompany class and point out new methods being experimented.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: Books and Booklets - Bibliography of available materials, I-C-E. **Audio–Visual:** See sources of Environmental AV materials - I-C-E bibliography of available materials - Vertical file. Film: #3583; Food and People, BAVI, Madison, Wisconsin **Community:** American Agricultural Association Local college Sociology Dept. Univ. of Wisconsin - School of Agriculture	

E. S. E. A. Title III - PROJECT I-C-E 59-70-0135-4

Environmental:

Integrated with:

CONCEPT NO. 4 - Water

SUBJECT Social Studies

ORIENTATION Water Uses

TOPIC/UNIT Geography

BEHAVIORAL OBJECTIVES

Cognitive:

List five reasons for the need of clean water showing that an adequate supply of clean water is essential for life.

Affective:

The need for maintaining an adequate supply of clean water.

Skills Used:

1. Identify characteristics of various fish.
2. Speak in a clear voice.
3. Speak in his own words.
4. Show colored illustration.
5. Ask for questions at end of report.
6. Discussion

STUDENT-CENTERED LEARNING ACTIVITIES

In-Class:

A. Have class answer and discuss the following:

1. How do we use water in our daily lives?
2. How many like to go fishing?
3. Name kinds of fish you catch.
4. Allow students to tell some of their fishing experiences.
5. Fishing is an industry.

B. Show film, "Wisconsin Fish" (tells about 21 fish in color).

C. Show Film, "Fishing Five Great Lakes".

D. Have the class discuss the balance of nature within lakes, river, and stream.

1. Why are some lakes out of balance?
2. Can an existing imbalance be corrected? How?
3. Why do we need to maintain a balance?

Outside or Community:

A. Visit a fish hatchery.
   1. Observe the raising of fish at different stages.
   2. Notice all the care given to young fish.
   3. Learn why we have fish hatcheries.

B. Learn to identify fish with the following activity:

   1. Each student should select one fish and make a special study of it. Then report this information to class.

   2. Student should draw, color or paint a large illustration of his fish on 12" x 18" paper.

C. Have a member from the Dept. of Natural Resources talk to class about fish and fish management.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Fish Guide to Familiar American Species, Zim and Shoemaker.
All About Fish, Carl Burger.
Fish and Their Ways, Herbert S. Zim.
Bulletins - Dept. of Natural Resources:
Wisconsin Game Fish.
Wisconsin Fish Management, Pub. 2-5-52.
Fish Habitat Development.

Audio-Visual:

Wisconsin Fish.
Funfish for Everyone
Better Fishing.
Northern Walleye Story.
Coho.
Invader of the Great Lakes.
(all films available from the Department of Natural Resources)
Kit 12, Water Pollution, ICE - RMC

Film #5622; Fishing Five Great Lakes
BAVI, Madison, Wisconsin

Community:

Dept. of Natural Resources:
Fish manager to speak to class on fish and fish management.

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental: **Integrated with:**

CONCEPT NO. 4 - Water SUBJECT Social Studies

ORIENTATION Water Uses TOPIC/UNIT History or Geography

BEHAVIORAL OBJECTIVES

Cognitive:

List three reasons why early population centers developed along waterways.

Affective:

Promote the idea that an adequate supply of water is essential to life and there is a need for conservation of water in all communities.

Skills Used:

1. Formation of relief maps from paper mache, clay or plaster of paris.
2. Ability to express clear and concise thoughts through the media of report writing.
3. Interviewing a resource person.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Examine several relief maps.

B. Discuss construction of relief maps with plaster of paris, paper mache or clay.

C. Discuss possible uses of water from the early 1600's to present time.

D. Assign:
   1. Groups to construct relief maps using either clay technique depicting man's use of water in a rural or urban center.
   2. Write a brief report on how man used and/or misused the water supply in each area, and how it could have been used in order to conserve the supply.

Outside or Community:

A. Locate books on the early civilization and westward movements of the people in the United States.
   1. Note from the readings how man used and misused the water supply.
   2. Note from population maps of areas that are being studied, where people settled.

B. Invite a field representative of the State Conservation Department to discuss how water is being used in the school community.
   1. Discuss with representative what can be done to clean polluted water and how the water supply in the school community can be put to better use.

C. Art teacher to explain the construction of relief maps using plaster of paris, paper mache or clay.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: Basic Text. Atlas. Free road maps (for detail). Any oil company, (Standard, etc.). **Audio-Visual:** The Stream, #320, ICE RMC. Boomsville, #400, ICE RMC. Men at Bay, #250, ICE RMC. Kit 12 Ecology: Water Pollution, IMC RMC. **Community:** Area Dept. of Natural Resources representative Art teacher	

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

CONCEPT NO. 5 - Air

ORIENTATION Air Pollution

Integrated with:

SUBJECT Social Studies

TOPIC/UNIT Current Events

BEHAVIORAL OBJECTIVES

Cognitive:

The student will list three ways in which air pollution is harmful.

Affective:

The student will become more aware of the air pollution problem and see the need for a more active role by individuals in solving the problem.

Skills Used:

1. Brainstorming techniques.
2. Playing a simulation game.
3. Preparing bulletin board.
4. Debating.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Brainstorm the advantages and disadvantages of industrialization.

B. Show filmstrip Environmental Pollution...Our World in Crisis.

C. Play simulation game Smog to discover possible solution to the air pollution problem in an industrial area.

D. Prepare bulletin board display from snapshots, newspaper articles and illustrative drawings of the advantages and disadvantages of a local industry or industries.

   1. Students could take their own snapshots for display.
   2. Use local paper.

E. Propose an industry or industries of your own area and debate the pros and cons of that industry.

Outside or Community:

A. Organize a field trip to an industrial area.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Discovering American History, Holt Rinehart & Winston, 1967. pp. 545-574.
Dirty Air, Give Earth a Chance Series, Project, Environmental Science Center.
Discussion and Debate, National Textbook Company.
Thirty Basic Speech Experiences, Clark Publishing.

Audio-Visual:

Filmstrip:
Ward's Natural Science Establishment, Inc. 1969
Environmental Pollution...
Our World in Crisis, FS, ST1; Project I-C-E Resource Center, 1927 Main Street Green Bay, Wisconsin 54301
Smog, The Air Pollution Game, SG1; Project I-C-E RMC.
Ibid.
Kit 1, Topics in Ecology, I-C-E RMC

Community:

Local Industries
English teachers
UWGB Environmental Sciences Dept., Green Bay, Wisconsin

Audio-Visual: (Continued)

Environmental Quality Kit, Write: Dr. Pepper Co., Pepsi Cola, Oshkosh, Wisconsin

Film: Men at Bay, #250, 25 minutes, I-C-E RMC.

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 5 - Air

SUBJECT Social Studies

ORIENTATION Air Pollution

TOPIC/UNIT Regional Geography or Current Events

BEHAVIORAL OBJECTIVES

Cognitive:

List and describe five ways the air becomes polluted through a report, a play, or an experiment on air pollution.

Affective:

Demonstrate an awareness of ways that the air is polluted in their local community, and promotes the need for curtailing the source of, or eliminating the problem.

Skills Used:

1. Discussion
2. Observation
3. Reporting

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Show filmstrips: Air and Life.

B. Discuss how air becomes polluted. Have comparative discussion of air pollution in reference to Pittsburgh, Chicago, and Los Angeles in U. S., with Cologne, Hamburg and Berlin of West Germany.

C. List ways the air becomes polluted.

D. Suggestive activities:
   1. Reports on air pollution.
   2. Write a play pertaining to air pollution.
   3. Student may illustrate, with an experiment, the pollution of air.

Outside or Community:

A. Have class take a trip to a local industry and observe the pollution; also the ways they have begun to improve this condition.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Environmental Science Center,
Dirty Air.
Scientist's Institute for Public
Information - Air Pollution.
Write to:
Project I-C-E
Resource Center
1927 Main Street
Green Bay, Wisconsin 54301

Audio–Visual:

Air, I-C-E, Resource Center,
1927 Main Street, Green Bay, Wis.
Air and Life, I-C-E, Resource
Center, 1927 Main Street
Green Bay, Wisconsin
Film: Men at Bay, 25 minutes,
#250, I-C-E RMC.
Kit 1, Topics in Ecology
I-C-E RMC.

Community:

Visit an industry.

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 5 - Air

SUBJECT Social Studies

ORIENTATION Air Pollution

TOPIC/UNIT Cultural Geography or Current Events

BEHAVIORAL OBJECTIVES

Cognitive:

List two things industry is doing to combat air pollution.

Affective:

Demonstrate an appreciation of the difficulty involved in solving the air pollution problem by citing costs, curtailment of productivity, possible employment drop and time for the correction of a given problem.

Weigh alternative methods of correcting a pollution problem, and the effect of each on the community.

Skills Used:

1. Human relations and cooperation
2. Problem solving
3. Journalism skills
4. Knowledge of pollution laws
5. Units of measurements and statistic skills.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Pollution Survey Assignment.
   1. Divide class into small groups or pairs.
      a. Have each group contact local industry for acceptance of visit. (Explain reason)
      b. After acceptance, make sure that each group has a different industry.
   2. Written survey:
      a. Explain industry
      b. Possible causes of pollution (by-products)
      c. Methods of prevention by industry
      d. Conclusions gained by visit
   3. Panel of survey groups.
      a. Use one member of each survey group to form panel.
      b. Panel studies and collects surveys:
         1. List problems (different ones).
         2. Solutions being used
         3. Panel's solutions or conclusions
         4. Class drafts (majority opinion) own Pollution Laws
         5. Compare with existing local and state pollution laws.

Outside or Community:

A. Students will visit a local industry and conduct a survey to find out what (if anything) is being done to combat air pollution in their factory. They will then prepare a written summary of their visit.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: Books and Booklets - Bibliography of available materials, I-C-E. **Audio–Visual:** See sources of Environmental AV materials. I-C-E bibliography of available materials. Vertical file. Kit 24, Ecology in the '70s, Race for Death, I-C-E RMC **Community:** Local Chamber of Commerce. List of local pollution laws. List of state pollution controls. Local congressman: Interviewed or visit to class to explain own views on pollution controls. Division of Environment Proetection (DNR)	

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental: **Integrated with:**

CONCEPT NO. 6 - Resources **SUBJECT** Social Studies

ORIENTATION Population **TOPIC/UNIT** Ancient History or Geography

BEHAVIORAL OBJECTIVES

Cognitive:

Construct a large map of the world, showing locations of early civilization centers. List three similarities between early population centers and modern-day population centers.

Affective:

Accept the fact that there is an unequal distribution of natural resources which is responsible for wealth or lack of it in a given area.

Skills Used:

1. Research
2. Compilation of data
3. Writing

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Class construct a large map of the world showing centers of early civilization.
   1. Place map in center of bulletin board.

B. Each student, after research, writes a story about a population center of early civilization, also making local comparisons.
   1. Suggestions for reports: Early man's search for:
      a. Food
      b. Clothing
      c. Shelter
      d. Safety
      e. Knowledge
      f. Ways of doing things
   2. Place stories around map with a piece of colored yarn from population center to story.
   3. These stories may be illustrated with free hand drawings painted or colored.
      a. Display near story.

Outside or Community:

A. Library (I.M.C.) research on population distribution of early civilizations.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Exploring the Old World, Follett, pp. 1-17 textbook.
Atlas, large wall maps, physical and political.
Books:
The Story of Long Ago, Southworth.
The Search for Early Man, Horizon.
Billions of Years of You, Froman.
The First Men in the World, White.
People - Places, Mead.
The Caves of the Great Hunters, Baumann.

Audio-Visual:

Department of Natural Resources.
Film:
Yours Is the Land, DNR
Filmstrips:
Saving the Soil, FS - ST22; ICE RMC
Kit 14, Game: The Ecological Crisis, I-C-E RMC.
Game: Man and His Environment, ICE RMC, SG 4.
The Planet Management Game, SG7 I-C-E RMC.

Community:

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental: **Integrated with:**

CONCEPT NO. 6 - Resources **SUBJECT** Social Studies

ORIENTATION Distribution of Natural Resources **TOPIC/UNIT** Economic Geography

BEHAVIORAL OBJECTIVES

Cognitive:

List four geographic regions and the primary natural resources found in each.

Affective:

Investigate their region and determine or weigh the effect of natural resources on the quality of life within the region.

Skills Used:

1. Writing letters to gather information.
2. Making comparisons.
3. Preparing bulletin board displays.
4. Organizing.
5. Discussion

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Discussion on what determines the type of industry and quality of life in various areas of the United States. (Motivation).

B. Write letters to various State Departments to procure information and brochures on the kind of industry and natural resources found in each state.

C. Construct a bulletin board display from brochures and information received.

D. Set up guidelines or format for written reports. (English teacher could be called to assist).

E. Write reports (each student) showing how the displacement of natural resources affects the industry and quality of life comparing the information received from the various states.

Outside or Community:

A. Have class prepare a list of questions to ask the resource person, on how industry and quality of life are affected by the natural resources in the school community.

B. Have the mayor or a member of the city council visit the classroom to inform the class of the natural resources and industry found in the school community.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: Bibliography of available materials Books and booklets, I-C-E. **Audio-Visual:** Free maps, brochures, information from Chamber of Commerce of each state. A city map - Use to locate industrial, commercial, and residential centers within the city and/or county. **Community:** English teacher for report guidelines. Mayor council member.	

E. S. E. A. Title III - PROJECT I-C-E 59-70-0135-4

Environmental: **Integrated with:**

CONCEPT NO. 7 - Land Use **SUBJECT** Social Studies

ORIENTATION Population **TOPIC/UNIT** Economic Geography

BEHAVIORAL OBJECTIVES

Cognitive:

List four problems caused by increased population density.

Evaluate two proposed methods to reduce the population density for the future giving reasons why you would support one or none of them.

Affective:

Investigate what determined land use in their community, and debate its effectiveness in promoting best land use.

Skills Used:

1. Applying the principle - change.
2. Writing letters to receive information.
3. Drawing out necessary information for the construction of a map.
4. Constructing a "relief" floor map.

STUDENT-CENTERED LEARNING ACTIVITIES

In-Class:

A. Construct a relief map labeling the stages of change that evolved due to population increase in the area shown. (local area)

B. After studying this map, suggest possible alternate sites to present development and land use.

C. Discuss why priorities should be placed on land use.

D. A Land Ethic, Field Activity Guide; I-C-E - RMC.

Outside or Community:

A. Visit a growing city such as Milwaukee, Madison, etc. and note the amount of land used by buildings and roadways in the "core" city and the surrounding area.

B. Compare and contrast in writing or discussion, land use priorities of a larger metropolitan area with your own.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Archives of newspapers.
Bibliography of available materials -
Books and booklets, I-C-E

Audio-Visual:

Films:
#1581, Population Patterns in the U.S.
#6937, Population Problem: U.S.A.
Seeds of Change
Both obtained from:
Bureau of Audio-Visual Instruction
1327 University Avenue
P. O. Box 2093
Madison, Wisconsin 53701
Game - Planet Management Game
SG7 I-C-E RMC
Kit 14, The Ecological Crisis,
I-C-E RMC

Community:

Chamber of Commerce
Libraries
Recorder of Deeds
State Historical Society
English teacher
Art teacher
Travel agencies - information,
posters, city maps

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 7 - Land Use

SUBJECT Social Studies

ORIENTATION Land Use

TOPIC/UNIT Sociology

BEHAVIORAL OBJECTIVES

Cognitive:

List five instances where the natural environment in an area was changed to satisfy man's desires or gains. Explain one reason why changes occurred for each of the instances listed above.

Affective:

Desire to develop a promotion to establish a new value system regarding land use aimed at the average person in his community.

Skills Used:

1. Recognizing the mistakes of the past.
2. Understanding & comparing accumulative data
3. Knowledge of values
4. Independent study & thought processes.
5. Discussion

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. All students are assigned to list and compile any case in which the natural environment has been altered by man for man's use. Examples:
   1. Road and bridge construction.
   2. Commercialism (tourism)
   3. Economic gain (short term)
   4. Transportation
      a. Railroads
      b. SST
      c. Combustion engine
   5. Housing projects
   6. Real estate profits
   7. Civil corps of engineers
      a. Dams
      b. Hydro Elec. plants
   8. Recreation areas
      a. Disneylands
      b. Parks and campgrounds
      d. KOA & other chains

B. Each student will then list reasons man may have used to make these changes in our land. (man's values)

(Continued)

Outside or Community:

A. Discuss what changes have occurred in the community with people who have lived in the community for a relatively long period of time.

B. Make a tour of the community in search of change.

SUGGESTED RESOURCES

Publications:

Books:

The World You Inherit, John Navarra

Our Polluted World, John Perry

This Crowded Planet, Margaret Hyde

Audio-Visual:

Films:

City Reborn, color, 22 min., $3.50, BAVI, Madison, Wisconsin

Harmony, I-C-E RMC

Game:

Man in His Environment, Coca-Cola, 1970, also I-C-E RMC

Kit:

Conservation: A Picture Discussion Kit, Kit 8; I-C-E RMC

Environmental Quality Index, Kit 9, I-C-E RMC

Community:

City Planner.

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

C. Class discussion:
   1. Compile and compare lists of all students.
   2. List of values by class which led to these changes in our environment.
   3. Class development of new values.
   4. Reasons why we need new values.
   5. Summary.

D. Have local city planner make presentation on future land use or development in your area.

E. Land Use - A Simulation Game; Field Activity Guide - I-C-E - RMC

F. Billboards and Signs;

Field Activity Guide - I-C-E - RMC (See attached activity)

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Project I-C-E
Serving Schools in CESA's 3-8-9
1927 Main Street
Green Bay, Wisconsin 54301
Robert Warpinski

BILLBOARDS AND SIGNS

An Environmental Activity for Grades 5-12

Integration Potential

1. Social Studies
2. Mathematics
3. Art
4. Language Arts

Concepts Involved

1. Energy
3. Carrying Capacity
8. Values and Attitudes
9. Manage, Manipulate, Change
11. Individual Acts
12. Stewardship

Introduction

Advertising billboards, sales promotion, informational, and directional signs are a part of our everyday life. They vary only in number and intensity in different types of communities. There is a need and a purpose for signs and billboards ranging from providing necessary information to pure and simple economic exploitation. In the worst sense, they can create a monster called visual pollution that is both a real physical threat and an affront to our aesthetic senses. The issue then, is to discriminate between what is necessary and desirable and what is unsightly and offensive in the number, kind, and type of signs and billboards. To accomplish this we need to focus and sharpen our senses of perception and visual discrimination. And finally, when necessary, we must be committed to some action in a rational way, at least to be able to offer some suggestions for improvement.

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Billboards and Signs - Activity Worksheet
(Individuals or teams of 3-5)

1. Identify the area limits of survey -- draw a sketch of the streets, label them.

2. Take one, or several, pictures from a vantage point that best takes in the survey area: Locate your vantage point on sketch above by a ⊗ .

3. Tally of commercial signs:

a) Identify type of business	b) Number of signs for each
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
Total Number _____	Total Number _____

BEST COPY AVAILABLE

4. Tally of public control, direction, information signs

a) Identify kinds of signs	b) Number of each kind
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Number of Kinds _____ Total Number _____

5. Count and describe any other signs or billboards in the area not included in Items 3 or 4:

a)

b)

c)

d)

e)

6. From the list of signs/billboards noted before

a) Select one most necessary and explain why:

b) Select one most unnecessary and explain why:

c) Select one most attractive and explain why:

d) Select one most unattractive and explain why:

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7. Select one commercial establishment, critique its use of signs and make suggestions for improvement.

8. Comment briefly on total perception, recommend any improvements you would make and tell why.

Resources: I-C-E RMC

115 Jo — DeSchool Primer: Your City Has Been Kidnapped

120 0 — GEE, Our Man-Made Environment, Book 7

Film — Noisy Landscape, 13 1/2 min., color
(Donated by NEW Chapter, American Institute of Architects)

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 7 - Land Use

SUBJECT Social Studies

ORIENTATION Water Resources & Population Growth

TOPIC/UNIT Economic Geography

BEHAVIORAL OBJECTIVES

Cognitive:

State three reasons why world trade centers grew where they did.

Affective:

Defends the importance of water resources as a determinant of population growth.

Skills Used:

1. Map making
2. Interdependence of man
3. Effect thinking
4. Reading map symbols
5. Letter writing to gain information.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Draw individual maps which represent Europe of 1400-1500.
   1. Show important cities, seaports, trading centers.
   2. Note location of same.

B. Draw map of U. S. showing important cities, seaports, and trading centers. Note location. NOTE: Maps should prove importance of water to location of major cities.

C. Class Oriented Activity
   1. Note connection between trade position & world importance of nation.
   2. Prepare written reports discussing the location of trade centers and their effect on the environment.
   3. Observe maps of the local area to note the importance of water to the location of cities.

Outside or Community:

A. Request the Dept. of Natural Resources to supply information areas of Wisconsin & their locations.

B. Member of Regional Planning Commission to speak on effects of an adequate water supply.

C. Visit local sewage treatment plant & observe the effect it has on local waterway.

D. Locate industries on local waterways.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: World Atlas Books and booklets: Bibliography of Available Materials of Project I-C-E **Audio-Visual:** Film: #400 Boomsville, I-C-E RMC 0667 Europe-Industrial Western (Factories, Mines & Waterways) BAVI, Madison, Wisconsin 3730 Transportation: American Inland Waterways, BAVI Filmstrip: FS Stl; Environmental Pollution: Our World in Crisis, I-C-E RMC Film: #320 The Stream, I-C-E RMC #280 The Gitts, I-C-E RMC Kit: #12 Water Pollution, ICE - RMC **Community:** Dept. of Natural Resources Local Planning Agency	

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental: **Integrated with:**

CONCEPT NO. 7 - Land Use **SUBJECT** Social Studies

ORIENTATION Urban Transition - Transportation System **TOPIC/UNIT** Sociology-Population Density

BEHAVIORAL OBJECTIVES

Cognitive:

List three reasons why types of transportation systems have changed in his region over the last twenty years.

Evaluate each of the changes in types of transportation systems as being good or harmful to the environment.

Affective:

Attempt to explain the factors that affect changes in the use of land and the population density in their area.

Skills Used:

1. Interviewing
2. Comparing-contrasting
3. Organizing information

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Set up situation by posing several problems or questions:
   1. Why is the area you live in or attend school in a population center and not a wilderness area?
   2. How has the area changed in last 50 years?
   3. What animals and birds are native to the area in question? How many have you seen? How many are now extinct?
   4. Has character of town changed in past 50 years, i.e., industry, people, recreation?
   5. The students may want to throw in several questions.

B. The above questions can be "answered" through a variety of approaches:
   1. Written reports of "then" & photographs of "now".
   2. Interview golden-agers or possibly have them come into classes.
   3. Slide presentations plus audio using tape recorders.
   4. Construct large pictures of extinct wildlife - use opaque projector if art ability is lacking.

Outside or Community:

A. Ask a real estate developer to discuss the areas he considers developing a housing project.

B. Area retail store could supply someone with many years' experience to share these experiences with the class. His presentation should center on how his products have changed over the years.

C. A representative from the city transportation department may be able to explain change goals for his department.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: Use of local library files Use newspaper files Publications showing wildlife - their habitat, etc. from: Dept. of Natural Resources Conservation Department Your assemblyman or senator - good source of materials. **Audio–Visual:** Movies - showing growth of industry related to area. A. Check local industry for materials & films. B. See sources of environmental materials - I-C-E Biblio. **Community:** Local farmer who has sold land for urban development. Real estate developer Member of the city road commission	

E. S. E. A. Title III – PROJECT I–C–F 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 8 - Values and Attitudes

SUBJECT Social Studies

ORIENTATION Regional Planning

TOPIC/UNIT Economics

BEHAVIORAL OBJECTIVES

Cognitive:

Determine the cost and the process involved in an environmental change he things is necessary in his community.

Affective:

Demonstrate their awareness of the priority of changes needed to improve environmental problems by listing needs of their area in the order of importance.

Skills Used:

1. Research
2. Organization of data
3. Presentation of material
4. Interviewing resource people
5. Making graphic displays
6. Collecting data

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Have students do research on the costs of/or the money being spent on the areas of land, water, and air improvement. (local level)

1. May build displays on how this is being done.

a. Depending upon class size group work on the displays according to student's interest may be done.

2. Information obtained may be presented to the class as a whole with oral presentations.

Outside or Community:

A. Students will go out into the local area to evaluate and estimate how much money it would cost for improvements in their areas. (Cost involved, resource people needed, political appropriation needs, new laws passed and how they need backing, scientific resources needed).

1. Group evaluations of their area (listing of priorities of their area as needed in their local area, getting in resource people and displays of local problems).

2. Group activity as a whole: Each group will present their case for their interest area. Present their priorities. Each group's priorities will be evaluated by the class. A list of class priorities will evolve.

SUGGESTED RESOURCES

Publications:

Books:
The Life of the Green Plant by Arthur Galston, Prentice-Hall
Plant Life, Lorus Milne and Margery Milne, Prentice-Hall
The Story of the Plant Kingdom by Merle Coulter and Howard Dittmer
Conservation in America by Dorothy Hogner
Soil: Use and Improvement by J. H. Stallings
Man and the Good Earth by Anabel and Ellis Williams

Audio-Visual:

Films: BAVI
#4546, Life in a Cubic Foot of Air, Coronet, 1958
#3255 Life in the Grasslands, EBF, 1954
#1723 Pond Life, EBF, 1950
#2359 Vital Earth (This), EBF,
#2384 Water Supply, Academy, 1947
#4816 Water for Farm & City, USDA, '59
#5079 Conserving Our Soil Today, Coronet, 1960
#2486 Work of the Atmosphere, EBF 1935
Kit:
The Land Use Game, ICE RMC

Community:

CONTINUED OR ADDED LEARNING ACTIVITIES

PUBLICATIONS (Continued)

Books:
Adaptation by Bruce Wallace and Adrian Srle.

Additional Interdisciplinary Areas:

Science

1. Water analysis activities (nutrients, pollutants, flow, temperature changes (causes and effects of), mapping of water sources, uses of the water supply and effects (organism life)
2. Land (soil classification, soil testing for acidity, soil plant life relation, land forms).
3. Air (testing air quality, air relationship with living organisms, causes of pollution).

Social Studies

1. Study of local government-state federal. (structure-elected and appointed officials, authority, committees, how bills are written, how a law is passed).
2. Have students write a bill on an environmental problem arrived at from the list of priorities.
3. Role-playing concerning the passage of this bill. This would follow the procedure studied.

Math

1. Study of:
   a. Costs involved in setting up of environmental programs
   b. Budgets of local, state, and federal government
2. Concepts:
   a. Ratios
   b. Fractions
   c. Decimals
   d. Multiplication, division, subtraction, and addition of the above.

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 8 - Values and Attitudes

SUBJECT Social Studies

ORIENTATION Attitudes

TOPIC/UNIT Current Events

BEHAVIORAL OBJECTIVES

Cognitive:

Explain that cultural, social, economic, and political factors affect a person's views of the environment using a specific occupational group as an example, in a panel discussion.

Affective:

Accept the fact that different factors and ideas affect people's attitudes toward land use.

Skills Used:

1. Interviewing skills
2. Public speaking
3. Information gathering
4. Organizing materials

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Class will be divided into three groups for purpose of preparing a round-table discussion. The three groups will represent industry, farmers, and conservationists. (Note: select one person to be moderator). Subject of discussion could be: "Man's attitudes toward the environment."
   1. Members of each group will select several members to represent their views on discussion group.
   2. Entire group will be responsible for preparing their representatives for discussion by:
      a. Researching newspaper articles
      b. Pictures from magazines
      c. Interviews of local people associated with groups involved.
      d. Prepare charts-statistics
      e. Prepare bulletin board
      f. Dig out background info. from texts, etc.
      g. Write to various interest groups for information.

B. Arrange to have round-table discussion in class not heretofore involved - take vote at end to see which group presented best argument.

Outside or Community:

A. Library (I.M.C.) research done by group members.

B. Interviewing resource people associated with the various interest groups.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: Newspapers and magazines 30 Basic Speech Experiences, Clark Publishing Co. Speaking by Doing, National Textbook Co., Ill. **Audio–Visual:** See I-C-E Bibliography of Available Materials **Community:** Local resource people	

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 8 - Values and Attitudes

SUBJECT Social Studies

ORIENTATION Attitudes

TOPIC/UNIT Geography - Urban Growth

BEHAVIORAL OBJECTIVES

Cognitive:

Define regional planning. List 3 reasons for the necessity of regional planning.

Affective:

Demonstrate an appreciation of conservation practices in his community by identifying such practices and stating they are good.

Skills Used:

1. Letter writing
2. Converting written information to chart, graph or mural form
3. Discussion

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Set up unit using fact: "Highways, cities, airports are taking over 1/2 million acres of farmland annually".
B. Class discussion of problem - local level (city-school district).
   1. List local places where such a situation exists
   2. Are there possible alternate sites? Where?
C. Set up student groups:
   1. Write letters to surrounding states requesting appropriate information.
   2. Construct a large chart, mural or picture graph presenting to class the situation in various states according to information gathered through letters.
D. Construct graphs showing population trends & corresponding and use changes.
E. Construct a mural depicting the last 100 years of an area, or a mural depicting conservation practices in their community.
F. Display of old photos of area. These activities deal with local areas & issues - could branch out to include other areas of the United States.

Outside or Community:

A. Visit the local airport and observe and discuss benefits of air transportation. Also compare the benefits of air transportation with the environmental factors.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: 1970 Index - National Wildlife Federation I-C-E Bibliography of Available Materials **Audio–Visual:** Man and His Environment Game, Coca-Cola Co., I-C-E RMC Kit 27 - Changing Man's Values, I-C-E RMC Kit 28 - Saving What's Left, I-C-E RMC Film: #430; Urban Sprawl I-C-E - RMC **Community:** Chamber of Commerce Highway Dept. representative Local airport	

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 8 - Values and Attitudes

SUBJECT Social Studies

ORIENTATION Attitudes

TOPIC/UNIT Comparative Economics

BEHAVIORAL OBJECTIVES

Cognitive:

State two attitudes and values toward his environment.

State two attitudes and values that are commonly held by a culture different from his own.

Predict the resulting problems to be encountered if a person with values and attitudes common to one culture enters into another culture.

Affective:

Students will be able to analyze and recognize the need for conservation practices.

Accept attitudes and values commonly adhered to by other culture even though they are different from his own.

Skills Used:

1. Comparison/contrast
2. Soil conservation practices
3. Establishing standards of survival.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Using the text or outside resource material, determine the amount of goods and services the average individual in America uses in his lifetime.

   1. Contrast this with the basic needs of people of another culture.

B. List things Americans consider essential to their standard of living.

   1. Compare these with another culture.

C. Have individuals list the goods and services their families use in a given period of time.

Outside or Community:

A. A visit to local landfill site will graphically display that Americans discard more than many people of the world have.

B. Visit to local industry, preferably a "luxury" item.

C. Visit to local farm to investigate the methods used to conserve the soil.

D. Invite a soil manager from local firm or state agency to tell class about soil conservation.

E. Invite student from country with high population from local university to explain soil conservation in his country.

F. Invite exchange students in from other countries.

G. Invite people in from another culture that live in the area.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

National Geographic magazine
Farmer's Bulletins, No. F2171, "How To Control A Gully", 1961, Dept. of Agriculture
Agriculture Information Bulletin, No. AIB95, "The Soil That Went to Town."

Audio-Visual:

BAVI, Madison, Wisconsin
#4756 Land & People of India
#2680 Land & People of Japan
End of the Trail, Brown County Library
Story of the Plains Indians
Brown County Library
Kits:
- Environment: Changing Man's Values, Kit 27, I-C-E RMC
- Saving What's Left, Kit 28, ICE-RMC

Community:

Soil Conservation Department
Landfill site

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 8 - Values and Attitudes

SUBJECT Social Studies

ORIENTATION Attitudes Toward Forest Resources

TOPIC/UNIT Geography - Conservation

BEHAVIORAL OBJECTIVES

Cognitive:

Demonstrate one of man's attitudes toward forest management and explain how it influences his environment.

Affective:

Appreciate the value of trees and the need for reforestation of denuded areas.

Skills Used:

1. Select info about your tree
2. Take careful notes
3. Decide which details to include
4. Plan order in which you will present your information

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Introduce unit on trees with the following filmstrip, "Trees for 200!".

   1. Class discuss trees and their value.

B. Discuss, after preparation, the following terms: Windbreak, shelter, deciduous, coniferous, and tree farming.

C. Each student will make a special study of one local tree and report to class. Points for study are: shape, height, leaves, maturity, bark, kind of soil, value of tree and its uses, draw and paint illustration of your trees.

Outside or Community:

A. Invite a forester to speak to class explaining about tree farming, value of a woodlot, also how trees prevent erosion.

B. Trip to tree farm.

(continued)

SUGGESTED RESOURCES

Publications:

Books and Pamphlets:

Trees, Marlin Zim.
Forest Trees of Wisconsin
Trees of the Lake States
Trees and Game-Twin Crops
Protecting the Forests
Wisconsin Forests
Smokey Bear's Story

Audio-Visual:

Filmstrip:

FS ST23; Trees for 2001
I-C-E - RMC

Community:

Department of Natural Resources
Ask a forester to speak to
class on the subject of trees

CONTINUED OR ADDED LEARNING ACTIVITIES

SKILLS (Continued)

5. Plan an interesting introduction.
6. Plan a good concluding sentence or paragraph.
7. Proofread your report carefully.
8. Discussion.

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 9 - Management

SUBJECT Social Studies

ORIENTATION Conservation

TOPIC/UNIT Geography

BEHAVIORAL OBJECTIVES

Cognitive:

Draw and verbally explain a food pyramid of wildlife. List 5 laws that were enacted to prevent wildlife from becoming extinct.

Affective:

Defend the wildlife conservation regulations.

Skills Used:

1. Reporting with an outline
   - Name of animal
   - Characteristics
   - Habitat
   - Food
   - Conservation practice
   - Any experience with animals

(continued)

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Introduce a wildlife unit with a movie that shows many animals.
Suggestions for movie: Beaver Valley or Hunting Throughout the Year.
   1. Talk about animals. Students may tell of their experiences pertaining to wild animals.

B. Each student is required to report on one animal that he is interested in. Then do a large painted illustration, size 18 x 24 and display on bulletin board.

   1. This may be done in coordination with an art and English teacher.

Outside or Community:

A. Class should take a trip to a museum where there are good displays of mounted wildlife.

B. Invite a resource person such as a game manager of Dept. of Natural Resources to talk to your class about the Balance of Nature.

   1. Discuss the conservation of wildlife, our hunting laws and their needs. Show movie, Protectors of the Outdoors, or Red 14.
(Both movies are about wardens and their work).

   2. Discuss the safety of firearms and show the movie, Shooting Safety. Ask a warden to talk to students explaining laws and rules of hunting. Students will learn them correctly and in turn may teach them to someone else.

SUGGESTED RESOURCES

Publications:

Library suggestions:
- Mammals by Zim Hoffmeister
- Animal Camouflage
- Animal Sounds

Audio-Visual:

Bulletins:
- Mammals of Wisconsin
- Animal Tracks
- Wildlife, People and the Land

Films: (DNR)
- Beaver Valley
- Hunting Throughout the Year
- Protectors of the Outdoors
- Red 14
- Shooting Safety
- Whitetails in Winter
- Nature's Half Acre, #210; ICE RMC

Kits:
Ecology, Kit 4 - I-C-E RMC (cont'd.)

Community:

Department of Natural Resources representative
Game warden
Wildlife manager

CONTINUED OR ADDED LEARNING ACTIVITIES

AUDIO-VISUAL (continued)

Kits:
Focus on America's Northeast, Kt 15; I-C-E RMC

SKILLS (Continued)

2. Poster activity

- Study pictures of animals that student is making a special study of
- Practice drawing animal on large paper with a black crayon (can be newspaper)
- When animal is satisfactory, cut out and transfer to poster paper
- Draw in a fitting habitat; then paint
- Allow students to help each other with constructive help

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 9 - Management

SUBJECT Social Studies

ORIENTATION Land Use

TOPIC/UNIT Geography

BEHAVIORAL OBJECTIVES

Cognitive:

List five ways in which he uses forest products.

Compare the use of forest products and metal or plastics from soil for a given product in terms of:

a. Renewability
b. Cost of resource
c. Variety possible
d. Other effects

Affective:

Develop appreciation for forests and an awareness of his need for them by listing all items that he uses or comes in contact with in a day that are made from forest products.

Attempt to identify characteristics of a forest managed with proper methods and those that are not managed properly.

Skills Used:

1. Note taking
2. Organizing a presentation
3. Develop concepts of how trees are classified.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Forest resource management. (Group work).
   1. Group A: develop historical concepts of forest production.

   2. Group B: develop a list of items used in the classroom that come from timber products.

   3. Group C: develop a presentation on the forest as a home for animals.

Outside or Community:

A. If available, visit a local museum to view articles early woodsmen used.

B. Visit a paper mill or other local industry to view present-day techniques in timber use and production.

C. Take class trip to school forest, if possible.

SUGGESTED RESOURCES

Publications:

Various social studies books
Geography book of the U.S.
Encyclopedias
Reference books

Audio–Visual:

Reference maps of physical features
Films, A-V materials
Free maps, posters of areas from travel agencies, airlines, gas stations, etc.
Film:
Harmony, #340; I-C-E - RMC
Game:
Man in His Environment, SG4; I-C-E RMC
See sources of A-V materials in ICE Bibliography of avail.materials

(continued)

Community:

County forester
Have someone from the community involved in timber production talk to the class.

CONTINUED OR ADDED LEARNING ACTIVITIES

AUDIO-VISUAL (Continued)

Kits:

A Study of Urban and Rural Ecology, I-C-E RMC
Environmental Studies, 64 Activity Cards, I-C-E RMC

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 10 - Economic Planning

SUBJECT Social Studies

ORIENTATION Land Use

TOPIC/UNIT Geography or Current Events

BEHAVIORAL OBJECTIVES

Cognitive:

Through a graphic presentation, demonstrate that man can change his environment with short-term economic gains that will produce long-term environmental losses.

Affective:

Promote that short-term gains are not always the most beneficial to man.

Dispute a statement -- that in which a non-environmental factor is given priority over an environmental factor.

Skills Used:

1. Speaking before group
2. Charting information
3. Designing of displays
4. Bulletin boards
5. Reading newspapers

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

Divide class into groups (approx. 4 to group).

A. Each group will select an industry (lumber, oil, auto, fur, chemical, cattle, railroad, are a few that are well suited) and put together class presentations. A 20-minute time limit may be set. (Presentations should) include:

1. Maps showing areas of country in question - perhaps a combination of maps showing growth of industry across the nation.

2. Chart or graph showing the number of people involved, money, etc.

3. Visual display (if possible) of products of industry, could include bulletin board of pictures.

4. Mount for display, newspaper or magazine articles dealing with industry & include commercials.

(Continued)

Outside or Community:

A. Library (I.M.C.) research on specific subject area.

B. If possible, visit an area where short-term economic gains may result in long-term environmental loss.

SUGGESTED RESOURCES

Publications:

Reference books dealing with industry under investigation
Magazines, newspapers
Publications dealing with our state's natural resources

Audio-Visual:

Video-tape of news, etc. These would have to be supplied by the teacher.
Film:
Harmony, #340; I-C-E - RMC
Game:
Man in His Environment, SG4; I-C-E - RMC
Kit:
A Study of Rural and Urban Ecology, KT 21; I-C-E - RMC

Community:

Industrial leaders, owners to visit class
Visit local industries
Chamber of Commerce
Resource speakers

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

B. (Second part of presentation would be "As result of) industry growth, have we lost anything?"

1. Maps or charts showing decreased wildlife, natural resources, etc.
2. How does the use of product affect the environment? Example: cars - air pollution -- oil - pipe lines, well lines - ship wrecks -- housing - mud slides.
3. Mount news articles showing losses.
4. Possible 3D model of environmental change. Example - from forested area to cut over area, poorly designed housing development.

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 10 - Economic Planning

SUBJECT Social Studies

ORIENTATION Land Abuse

TOPIC/UNIT Eurasian History, Geography, Current Events

BEHAVIORAL OBJECTIVES

Cognitive:

Explain how improper care of forests causes increased erosion, disturbs balance of the existing ecosystem & leads to possible deprivation to future generations.

Evaluate a given procedure as to its value (effectiveness) in restoring the ecosystem to its state in 1900.

Affective:

Accepts the idea that land depleted of its life support base has an effect on the standard of living of future generations.

Skills Used:

1. Library skills.
2. Contrasting past & present.
3. Contrasting here & there.
4. Geographical location.
5. Observation.
6. Prediction.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. In studying the countries of the Eastern Mediterranean, concentrate on the loss of the forest cover and soils of the region.

B. Show film or filmstrips on Middle East, showing present agricultural methods and problems.

C. Discuss correlation between the damage to the land and the standard of living caused by unwise forest management in the Middle East and the problems America could face in the future.

D. Students construct imaginary reports on life in the U.S. 200 years from now (given no outside source of resources from rest of world) that could result from failure to maintain our forest & soil resources.

E. Show film explaining ways to protect a woodlot.

Outside or Community:

A. Students can investigate problems of cutting forests without providing for reforestration.

B. Students can investigate the problem of grazing cattle on farm woodlots.

C. Visit contrasting woodlots including the possibilities:
   1. Grazed woodlot.
   2. Protected woodlot.
   3. Diameter limit or
   4. Selective cut woodlot harvested by forest management plan approved by district forester.

D. Yuru the Guru Studies Ecology field activity guide, ICE RMC.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: National Geographic articles on the countries of the Middle East (Balkans-Greece) USDA pamphlets on problem of grazing in the woodlot USFS & DNR publications on caring for woodlands **Audio–Visual:** Film: The Middle East, BAVI, #3265 Trees are a Crop, BAVI, #2269 Harmony, #340, I-C-E - RMC Game: Man in His Environment, SG4; ICE RMC Films: Junkdump, #310; I-C-E - RMC Cry of the Marsh, #390, I-C-E - RMC I-C-E Bibliography **Community:** DNR District Forester USFS District Ranger County Agriculture Extension Office Soil Conservation Service Local Woodland Owners Local sawmill operator	

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

CONCEPT NO. 10 - Economic Planning

ORIENTATION Technology

Integrated with:

SUBJECT Social Studies

TOPIC/UNIT Economic Geography, Current Events

BEHAVIORAL OBJECTIVES

Cognitive:

List four of man's technological short-term gains that have resulted in long-term environmental losses.

Affective:

Attempt to recommend how man should gear his technology, taking into consideration environmental losses which might evolve.

Skills Used:

1. Observing
2. Listing
3. Reporting
4. Art work
5. Researching
6. Discussion

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Students bring magazines to class such as Look, Fortune, etc. and cut out pictures of man's technological shortcuts.

B. Arrange pictures in a collage sequence and have students write a short caption for each picture indicating the effect such technological shortcuts have on the environment.

C. Students will discuss how man's technology should consider environmental effect.

Outside or Community:

A. The student will take a trip through the community on a school bus and watch for areas where man has taken shortcuts in building projects, waste disposal, etc.

B. The student will list these instances and report orally to the class the results. The student will also hypothesize the effect such short-term economic gains will have on environment.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: Man & the Biosphere, Rand McNally Co. Air and Water Pollution, Perma-bound Books God's Own Junkyard, Holt, Rinehart and Winston, 1964 **Audio-Visual:** Films: What Are We Doing To Our World, BAVI Junkdump, ICE RMC, Film #310 **Community:** City engineer Industrial ecologist	

E. S. E. A. Title III – PROJECT I-C-E 59-70-0135-4

Environmental:

Integrated with:

CONCEPT NO. 10 - Economic Planning

SUBJECT Social Studies

ORIENTATION Resource Usage

TOPIC/UNIT Economic Geography, Current Events

BEHAVIORAL OBJECTIVES

Cognitive:

List three ways harvesting forests can be both beneficial and harmful to man.

Construct an appropriate management program for a given forest which includes:

a. Planting
b. Pruning
c. Cutting

Affective:

Evaluate the environmental losses and make suggestions for reforestration.

Skills Used:

1. Observing
2. Reporting

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. View film The Forest Produces.

B. Proceed with the suggested outside classroom activities.

C. View film Forest Conservation.

D. Discuss and emphasize the need for good forest management.

Outside or Community:

A. Class will visit a sawmill and observe the process of trees to lumber, also the area where trees were cut down.

B. Students may take pictures while visiting sawmill and forest area.

C. Students will orally report on the loss of forest lands with the aid of pictures.

D. Forester visiting class to explain misuse of trees and tree farming.

E. Class may visit local paper mill.

F. Class may visit a lumber yard.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: Trees and Forests, Stanley M. Jepsen The Life of the Forest **Audio-Visual:** Films: The Forest Produces, BAVI Forest Conservation, BAVI Harmony, ICE RMC, Film #340 **Community:** Dept. of Natural Resources Forester	

E. S. E. A. Title III – PROJECT I-C-E 59-70-0135-4

Environmental:

CONCEPT NO. 11 - Individual Acts

ORIENTATION Careers in Ecology

Integrated with:

SUBJECT Social Studies

TOPIC/UNIT Economics, Geography

BEHAVIORAL OBJECTIVES

Cognitive:

Report on an occupation related to ecology stating the need for that occupation.

Affective:

Demonstrate an interest in a specific area of ecology.

Promote the importance of the individual in solving the problems of ecology.

Skills Used:

1. Finding information in the library.
2. Reading for specific info.
3. Interviewing
4. Writing questions to use for interview.

(Continued)

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Brainstorm and make a list of the ecological occupations in and around the surrounding metropolitan area.

B. Construct a "loose-leaf" book from the list of jobs and information gathered from interviews.

C. Construct a career bulletin board and display center.
   1. Use information from any conceivable source. (colleges, newspapers, magazines, etc.)

D. Debate the "pros" and "cons" of any two controversial careers. (Real estate broker vs. soil conservationist; manager of a paper making plant vs. forester.)
   1. Following any debate, discuss how two interest groups with seemingly different ideas might work towards a common goal; environmental protection.

Outside or Community:

A. Have the students interview people in the community who have jobs that are directly or indirectly related to the environment. One question for the interview should be: How does your job benefit society and the environment in which we live?
   1. Ask a real estate agent to report to the class on the selection and development of a sub-division.

B. Have a game warden talk about fish and wildlife violations.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: Discussion and Debate, National Textbook Company Thirty Basic Speech Experiences, Clark Publishing college bulletins, catalogs, etc. **Audio-Visual:** See sources of environmental AV materials. ICE RMC Bibliography **Community:** People in various occupations Library Real estate broker Subdivision English or speech teacher	SKILLS (Continued) 5. Construction of "loose-leaf" book. 6. Constructing bulletin board and display center. 7. Debating

E. S. E. A. Title III -- PROJECT I-C-E 59-70-0135-4

Environmental: **Integrated with:**

CONCEPT NO. 11 - Individual Acts **SUBJECT** Social Studies

ORIENTATION Waste Disposal **TOPIC/UNIT** History - Middle Ages

BEHAVIORAL OBJECTIVES

Cognitive:

Graphically illustrate how an individual act may be insignificant environmentally, but the same act duplicated many times will cause environmental alterations.

Affective:

Seek to gather any number of examples of what individuals are doing around the school that would destroy the environment if compounded and will suggest ways of making corrections.

Skills Used:

1. Practice in use of reference texts.
2. Practice in use of Reader's Guide to Periodic Literature.
3. Development of political cartoons as a propoganda device.

STUDENT-CENTERED LEARNING ACTIVITIES

In-Class:

A. Read about the sanitary disposal problems of towns in the Middle Ages.
   1. Discuss the implications of disposing of wastes and garbage in the streets by individuals.
   2. Write editorials to the Middle Ages Gazette decrying the dumping in the streets.

B. View films and write critical summaries of each.

C. Draw cartoons depicting garbage problems which would be applicable to both the Middle Ages and today. (Just change dress of character.)

Outside or Community:

A. Guest speaker--art teacher speaking on effect of garbage on aesthetic values.

B. Visit sanitary landfill and open dump.

C. Visit sewage disposal facility.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

New Dimensions of World History, Frank Alwers, American Book Company, 1969
A Primer on Waste Water Treatment, Government Printing Office, 1969, 55¢

Audio–Visual:

Films:
Garbage, ICE RMC, Film #260
The Gifts, ICE RMC, Film #280
Junkdump, ICE RMC, Film #310
Kit:
America's Urban Crisis, ICE RMC, KT 13

Community:

Sanitary landfill site
Open dump site
Sewage disposal plant
Art teacher

E. S. E. A. Title III – PROJECT I-C-E 59-70-0135-4

Environmental:

Integrated with:

CONCEPT NO. 12 - Stewardship

SUBJECT Social Studies

ORIENTATION Water Resources

TOPIC/UNIT Geography or Government

BEHAVIORAL OBJECTIVES

Cognitive:

List three conservation practices needed for the correction of the damaged river system based on his observation of a local river area.

Affective:

Formulate possible legislation to protect water resources and send it to appropriate lawmakers.

Skills Used:

1. Discussion.
2. Observation.
3. Sketching, color or paint.
4. Possible letter writing to Congressmen.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Students will see movies: River Valley and Rivers that show graphic pictures of many geographic features associated with development of rivers and their utility to man.

B. Class may discuss the following:
   1. How did this river become polluted?
   2. How did the misuse of the adjacent areas start erosion?
   3. List four ways that these conditions can be corrected.
   4. How did the misuse of the river and adjacent area do harm to other people in this area?

C. Construct a mural depicting a river and its adjacent areas before the application of conservation practices and after.

D. Brainstorming to formulate possible legislation for water resource protection.

Outside or Community:

A. Students may visit a local river area and note the harm done, also report on any other rivers they have seen.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: Water or Your Life, Arthur H. Carhart Wisc. Stream Improvement, State Soil Conservation Committee, Madison, Wisconsin **Audio–Visual:** Films: River Valley, BAVI Rivers, BAVI Kit: Water Pollution, ICE RMC, KT 12 **Community:** Visit local river area	

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

CONCEPT NO. 12 - Stewardship

ORIENTATION Environmental Law

Integrated with:

SUBJECT Social Studies

TOPIC/UNIT Sociology, Government

BEHAVIORAL OBJECTIVES

Cognitive:

Develop a code of sportsman ethics which will be in harmony with the rights of both property and non-property owners.

Define stewardship accurately.

Affective:

Recommend that all Americans share in harmony with our environment.

Recommend that each person share the responsibility for the improvement of this environment.

Skills Used:

1. Knowledge of problems between landowners and non-landowners.
2. Ability to compromise on divergent land uses.
3. Ability to conduct investigative interviews without prejudice.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Scientific investigation:
   1. List the rights of property owners.
   2. List the rights of sportsmen and other non-property owners.
   3. Weigh pros and cons of both sides of issue and each student should formulate codes of ethics which they believe both the landowner and non-landowners could use in harmony and share in our resources.

Outside or Community:

A. Investigate local laws on trespassing and local problems in this area that law enforcement officers contend with.

B. Investigate local problems of posting on lands.
   1. Reasons (interviews with farmers).
   2. Effects on sportsmen, etc.

C. Invite the county soil conservation officer for a discussion of his duties.

D. Invite the county health officer to explain the need for percolation tests.

E. Call upon local college ecosystems analyst to explain and/or support the idea of stewardship.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: Natural Partnerships, The Story of Symbiosis, Dorothy Shuttlesworth Sportsman's magazines & publications Environmental Protection Agency publications: Solid Waste Solid Waste-It Won't Go Away Solid Waste Disposal Act The Solid Waste Management Program 1-4 A Critical Study of the Great Lakes and Who Owns the Water **Audio-Visual:** Films: Junkdump, ICE RMC, Film #310 The Stream, ICE RMC, Film #320 **Community:** Local farmers Local lakeshore property owners Local sportsmen Area game wardens Local law enforcement officers Dept. of Natural Resources	